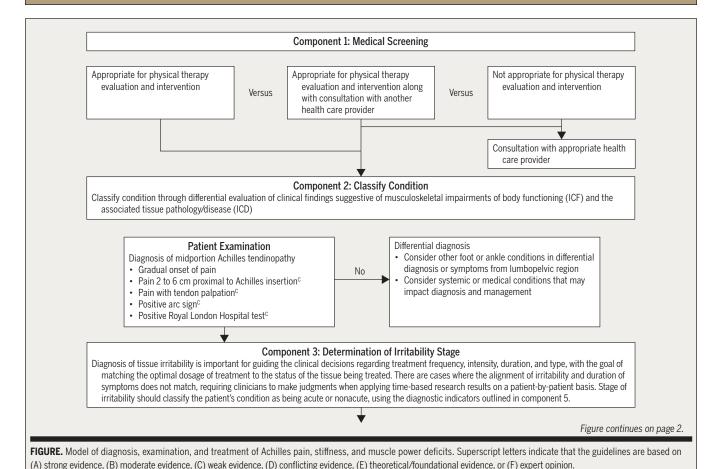


# Midportion Achilles Tendinopathy: Clinical Practice Guidelines Revision 2018



### **Decision Tree Model**

A pathoanatomical/medical diagnosis of midportion Achilles tendinopathy can provide valuable information in describing tissue pathology and may assist in planning treatment and predicting prognosis. The proposed model for examination, diagnosis, and treatment planning for patients with Achilles pain, stiffness, and muscle power deficits associated with midportion Achilles tendinopathy uses the following components: (1) medical screening, (2) classification of the condition through evaluation of clinical findings suggestive of musculoskeletal impairments of body functioning (ICF) and associated tissue pathology/disease (ICD, 3) determination of irritability stage, (4) determination of evaluative outcome measures, and (5) intervention strategies for patients in acute and nonacute stages. This model is depicted in the **FIGURE**.

### Component 1

Medical screening incorporates the findings from the history and physical examination to determine whether the patient's symptoms originate from a condition that requires referral to another health care provider. Acute Achilles tendon rupture and systemic inflammatory disease would be examples of conditions that would require referral to another health care provider.

#### Component 2

Evaluation of physical examination findings, as outlined in the **FIGURE**, should be consistent with the diagnosis of midportion Achilles tendinopathy. The diagnosis and management of the patient's condition should be appropriately modified if the evaluation of clinical findings related to the musculoskeletal impairments of body functioning (ICF) and associated tissue pathology/disease (ICD) suggest other foot or ankle conditions in a differential diagnosis list, symptoms from the lumbopelvic region, or systemic or medical disease.

#### Component 3

*Irritability* is a term used by rehabilitation practitioners to reflect the tissue's ability to handle physical stress, <sup>135</sup> and is presumably related to physical status and the extent of injury and inflammatory activity that is present. Diagnosis of tissue irritability as acute or nonacute, according to the signs, symptoms, and duration of the condition, is important in guiding the clinical decisions regarding the intervention strategies as outlined in component 5.

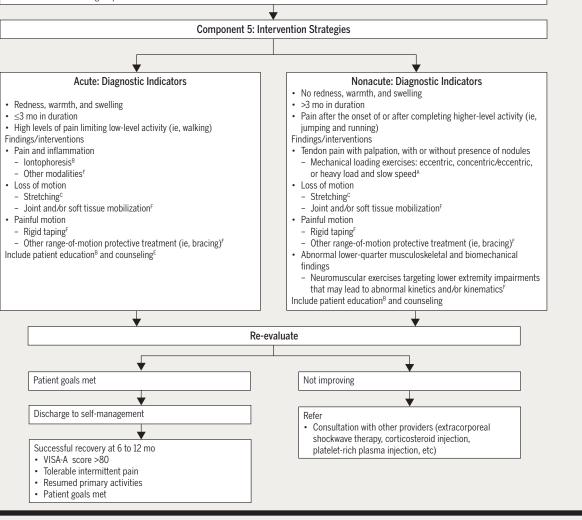


# Midportion Achilles Tendinopathy: Clinical Practice Guidelines Revision 2018

## Component 4: Outcome Measures

Measures to assess level of functioning, presence of associated physical impairments to address with treatment, and response to treatment

- The VISA-A as a measure of symptom severity and the FAAM or LEFS as a measure of self-reported activity limitation and participation restriction<sup>A</sup>
- · Pain visual analog scale to assess pain<sup>F</sup>
- Active and passive talocrural dorsiflexion range of motion<sup>F</sup>
- Flexibility of the gastrocnemius and soleus muscle complex<sup>F</sup>
- Body mass index in nonathletic individuals<sup>F</sup>
- Clinical performance measures, such as hop and heel-raise endurance tests<sup>B</sup>
- · Lower-quarter musculoskeletal and biomechanical assessment, to include the following elements of gait<sup>f</sup>
  - First metatarsophalangeal joint range of motion and accessory mobility: to attain 65° of extension at preswing
  - Tibialis posterior strength and movement coordination to control midtarsal joint motion at loading response
  - Talocrural dorsiflexion range of motion, accessory mobility, gastrocnemius/soleus muscle length, and tissue mobility to attain 10° of dorsiflexion at terminal stance
  - Gastrocnemius/soleus strength and movement coordination to control tibial advancement at midstance and propulsion at terminal stance
  - Hip joint mobility and muscle flexibility to attain 10° of extension at terminal stance
  - Trunk, buttock, and thigh muscle strength and movement coordination to control lower-limb internal rotation at loading response, and hip adduction at loading response and midstance



**FIGURE (CONTINUED).** Model of diagnosis, examination, and treatment of Achilles pain, stiffness, and muscle power deficits. Superscript letters indicate that the guidelines are based on (A) strong evidence, (B) moderate evidence, (C) weak evidence, (D) conflicting evidence, (E) theoretical/foundational evidence, or (F) expert opinion.



# MIDPORTION ACHILLES TENDINOPATHY: CLINICAL PRACTICE GUIDELINES REVISION 2018

#### Component 4

Outcome measures include an assessment of the patient's functional level and associated physical impairments as outlined in the **FIGURE**. Standardized tools, such as the VISA-A, FAAM, and LEFS, can be used for measuring a specific domain, whether it is a body structure or function, activity limitation, or participation restriction. Outcome measures are important in direct management of individual patient care, and they provide the opportunity to collectively compare care and determine effectiveness through the repeated application of standardized measurement.

### Component 5

Intervention strategies outline criteria for treatment selection based on diagnostic indicators and clinical examination findings and allow for treatment planning based on re-evaluation. Interventions are grouped based on the following categories: therapeutic exercise (exercise, stretching, neuromuscular education), manual therapy, education (patient education, patient counseling), home use of medical supplies (bracing), and clinical use of medical devices (iontophoresis). A higher level of evidence indicates greater scientific support for the recommendation, not necessarily the intervention itself. For example, there is a relatively high-level of evidence for the recommendation not to use night splints for patients with midportion Achilles tendinopathy. Interventions outside of the scope of physical therapy, including corticosteroid injection, extracorporeal shockwave therapy (ESWT), and platelet-rich plasma (PRP) injections, are included as education for patients who are seeking additional treatment options. Of note, the majority of studies include patients with chronic midportion Achilles tendinopathy. Therefore, treatment of a patient with acute Achilles tendinopathy may depend more on clinical judgment and expert opinion.



Martin RL, Chimenti R, Cuddeford T, et al. Achilles pain, stiffness, and muscle power deficits: midportion Achilles tendinopathy revision 2018: clinical practice guidelines linked to the International Classification of Functioning, Disability, and Health from the Orthopaedic Section of the American Physical Therapy Association. *J Orthop Sports Phys Ther 2018;48(5):A1–A38. doi:10.2519/jospt.2018.0302* 

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